

Claims

What is claimed is:

1. 1. An interface between a preconcentrator and a piece of
2. baggage, said interface comprising:
 3. (a) a top securing member;
 4. (b) a bottom securing member connected to said top
5. securing member and forming a gap therebetween; and
 6. (c) a recess having a perimetrical shape that corresponds
7. to the perimetrical shape of the exterior of a
8. preconcentrator, said recess comprising a vent.
1. 2. The interface of claim 1 further comprising two clamps,
2. wherein each of said clamps comprises a top lip connected
3. to said top securing member and a bottom lip connected to
4. said bottom securing member, thereby forming a gap
5. therebetween.
1. 3. The interface of claim 2 wherein the two clamps are
2. diametrically opposed to one another.
1. 4. The interface of claim 2 wherein the gap between said
2. bottom and top lips creates an opening.
1. 5. The interface of claim 3 wherein each of said clamps
2. further comprises a lever connected to said top lip,
3. thereby allowing the opening to expand and contract as said
4. lever moves toward and away from the center of the
5. interface, respectively.
1. 6. The interface of claim 1 further comprising at least one
2. securing hole within said recess.

- 1 7. The interface of claim 6 wherein said securing hole is
- 2 complementary to an electrode of the preconcentrator.
- 1 8. The interface of claim 1 further comprising a first locking
- 2 ring.
- 1 9. The interface of claim 8 further comprising a second
- 2 locking ring opposite said first locking ring.
- 1 10. An apparatus that serves as an interface between a
- 2 preconcentrator and a zipper within a piece of baggage,
- 3 wherein said zipper comprises two rows of teeth, said
- 4 apparatus comprising:
 - 5 (a) means for receiving a preconcentrator;
 - 6 (b) means for air to travel through said receiving means;
 - 7 and
 - 8 (c) means for gripping a portion of each row of teeth of a
 - 9 zipper within a piece of baggage.
- 1 11. The apparatus of claim 10 further including means for
- 2 securing at least one post of said preconcentrator to said
- 3 apparatus.
- 1 12. The apparatus of claim 10 further comprising means for
- 2 securing a lock for said baggage to said apparatus.
- 1 13. The apparatus of claim 10 wherein said gripping means
- 2 comprises two clamps, wherein each of said clamps
- 3 comprises:
 - 4 (i) a bottom lip;

5 (ii) a top lip creating a gap between said bottom
6 and top lips, wherein said gap comprises an
7 opening; and

8 (iii) means for enlarging said opening.

1 14. The interface of claim 13 wherein the two clamps are
2 diametrically opposed to one another.

1 15. An interface between a preconcentrator and a piece of
2 baggage, said interface comprising:
3 (a) a recess having a perimetrical shape that corresponds
4 to the perimetrical shape of the exterior of a
5 preconcentrator, said recess comprising a vent; and
6 (b) two clamps, wherein each of said clamps comprises a
7 bottom lip and a top lip for gripping a portion of the
8 baggage.

1 16. The interface of claim 15 wherein the two clamps are
2 diametrically opposed to one another.

1 17. The interface of claim 15 wherein the gap between said
2 bottom and top lips creates an opening.

1 18. The interface of claim 15 wherein each of said clamps
2 further comprises a lever connected to said top lip,
3 thereby allowing the opening to expand and contract as said
4 lever moves toward and away from the center of the
5 interface, respectively.

1 19. The interface of claim 15 further comprising at least one
2 securing hole within said recess.

- 1 20. The interface of claim 19 wherein said securing hole is
- 2 complementary to an electrode of the preconcentrator.
- 1 21. The interface of claim 15 further comprising a first
- 2 locking ring.
- 1 22. The interface of claim 21 further comprising a second
- 2 locking ring opposite said first locking ring.